The Idaho National Engineering and Environmental Laboratory

LOCKHEED MARTIN

FY 1998 Technology Deployment in Environmental Management

Solutions of the Future at the INEEL

Site Technology Coordination Group
U.S. Department of Energy, Idaho Operations Office

INEEL

Remote Underwater Characterization System at TRA-660

Problem: *Improved underwater characterization of water cooled nuclear reactors and fuel storage pools at depths exceeding 20 feet is needed.*

Baseline Technology: *The baseline technologies consist of radiation detectors and underwater cameras mounted on long poles, or stationary cameras with pan and tilt features mounted along the sides of the underwater facility.*

Innovative Technology: *The remote underwater characterization system (RUCS) is a small, remotely operated submersible vehicle system. The RUCS is designed to provide visual and gamma radiation characterization, even in confined areas.*

Comparison: *RUCS reduced the number of personnel that had to be suited up in the canal area, which saves labor and reduces the potential for personnel exposure and contamination. RUCS measured radiation levels 50% higher than previously known because of its ability to "fly" right up to objects.*

Savings: *Conservatively estimated at $5K over baseline technology.*

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